ORS0011-DIV **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

STEVEN KENNETH FRENDLE ET AL.

Art Unit: 1734

Serial No.: Divn. of USSN
09/300,387

Examiner: Gray, L.

Filed: June 6,2001

For: METHOD AND APPARATUS FOR DIE CUTTING AND MAKING SHAPED AND LAMINATE ARTICLES

PRELIMINARY AMENDMENT

Commissioner of Patents & Trademarks
Washington, D.C. 20231

Sir:

Prior to calculation of the filing fee and examination on the merits, please amend the above-identified application as detailed below.

IN THE SPECIFICATION

As shown in the attached sheets, please replace the paragraph beginning on page 1, line 3; the paragraph beginning on page 7, line 10; the paragraph beginning on page 7, line 12; the paragraph beginning on page 13, line 8; and the paragraph beginning on page 16, line 8.

Inventor: Steven K. FRENDLE et al.
Attorney Docket No. ORS0011-DIV.

IN THE CLAIMS

Please cancel claims 1-40 and add new claims 41-80 as shown in the attached sheets.

REPLACEMENT SPECIFICATION PARAGRAPHS

Paragraph beginning on page 1, line 3:

The present application is a divisional application of the nonprovisional patent application serial number 09/300,387 filed April 27, 1999, entitled "Method and Apparatus for Die Cutting and Making Laminate Articles," which claimed priority from the filing date of the provisional patent application serial number 60/083,290 filed April 28, 1998, entitled "Method and Apparatus for Die Cutting and Making Laminate Articles."

Paragraph beginning on page 7, line 10:

Figures 5a and 5b are enlarged front views of the anvils and rotary die of the sections illustrated in Figures 3 and 4.

Paragraph beginning on page 7, line 12:

Figure 6 is an exploded view of the rotary die illustrated in Figures 5a and 5b.

Paragraph beginning on page 13, line 8:

The compressive force or downward pressure to the rotary die 301 may be applied to the bearer surfaces 506 or journals 507 of rotary die 301, as shown in Figures 5a and 5b. The bearer surfaces 506 of the rotary die are located at both ends of the cylindrical die and extend radially outward beyond the cutting surface of the die. The journals 507 are located on the outside of the apparatus, on both sides, where the axle of the rotary die exits the casing of the apparatus. In the

preferred embodiment of the present invention, as shown in Figures 5a and 5b, the downward pressure is applied to the bearer surfaces 506 to prevent the rotary die 301 from lifting up off of the primary web material 302 as the primary web material 302 is being cut or laminated.

Paragraph beginning on page 16, line 8:

For both the shaping and lamination configurations, in the preferred embodiment of the present invention, the rotary die and anvil roller are configured to provide specific cuts or shaping. As illustrated in Figures 5a and 5b, a stepped anvil roller 502 can be stepped down so as to touch the blades of rotary die 501 and cut through the primary or secondary web material to produce what is known as a through-cut. Alternatively, regular anvil roller 503 is offset from the cutting surface of the rotary die 501, thereby only cutting a portion of the material it contacts to produce what is known as a kiss-cut. Manufacturing processes use the kiss-cut to cut only a portion of a multi-layered material, *e.g.,* cutting a primary web material but leaving an attached liner intact.

REPLACEMENT CLAIMS

Please add the following new claims 41-80:

41. (New) A method for shaping web materials comprising the steps of:

(a) feeding a web material between a rotary die and an anvil roller, wherein the rotary die and the anvil roller are rotating in opposite directions;

(b) cutting the web material with the rotary die into a web product and a web flash;

(c) conveying the web product away from the anvil roller; and

(d) removing the web flash for recycling.

42. (New) The method of claim 41, wherein the step of feeding a web material comprises conveying the web material on a vacuum belt.

43. (New) The method of claim 41, wherein the step of conveying the web product away comprises conveying the web product on a vacuum belt.

44. (New) The method of claim 41, wherein the step of removing the web flash comprises conveying the web flash on a belt.

45. (New) The method of claim 41, wherein the step of removing the web flash further comprises applying lubricant to the rotary die to ease removal of the web flash from the rotary die.

46. (New) The method of claim 41, wherein the web material comprises more than one layer and the anvil roller is configured to produce a kiss-cut, wherein the rotary die cuts only one layer of the web material.

47. (New) The method of claim 46, wherein the web material comprises a product layer and a liner, and wherein the rotary die cuts only the product layer into the web product and the web flash.

48. (New) The method of claim 47, wherein the product layer comprises at least one mastic and the liner comprises at least one member selected from the group consisting of paper, polyethylene, polyester, aluminum foil, brass foil, and copper foil.

49. (New) The method of claim 47, wherein the product layer comprises rubber butyl based mastic and the liner comprises rubber butyl web.

50. (New) The method of claim 41, wherein the anvil roller is configured to produce a through-cut.

51. (New) The method of claim 41, further comprising the steps of:

(e) adhering the web product to the rotary die;

(f) rotating the web product around the rotary die to the bottom of the rotary die;

(g) feeding a primary web material between the rotary die and a second anvil roller, wherein the rotary die and the second anvil roller are rotating in opposite directions;

(h) joining the web product and the primary web material at a location between the rotary die and the second anvil roller;

(i) cutting the primary web material with the rotary die into a primary web product and a primary web flash, wherein the primary web product is equal in size and shape to the web product and is attached to the web product to form a final product;

(j) conveying the final product away from the rotary die and the second anvil roller; and

(k) removing the primary web flash for recycling.

52. (New) The method of claim 51, wherein the step of feeding the primary web material comprises conveying the primary web material on a vacuum belt.

53. (New) The method of claim 51, wherein the step of conveying the final product away comprises conveying the final product away on a vacuum belt.

54. (New) The method of claim 51, wherein the step of removing the web flash comprises conveying the web flash on a belt.

55. (New) The method of claim 51, wherein the step of removing the web flash comprises vacuuming the web flash off of the anvil roller.

56. (New) The method of claim 51, wherein the step of removing the primary web flash comprises conveying the primary web flash on a belt.

57. (New) The method of claim 51, wherein the step of removing the web flash further comprises applying lubricant to the rotary die to ease removal of the web flash from the rotary die.

58. (New) The method of claim 51, wherein the step of removing the primary web flash further comprises applying lubricant to the rotary die to ease removal of the primary web flash from the rotary die.

59. (New) The method of claim 51, wherein the step of adhering the web product to the rotary die comprises applying a vacuum through the rotary die.

60. (New) The method of claim 51, wherein the step of adhering the web product to the rotary die comprises applying temporary adhesive to the rotary die.

61. (New) The method of claim 51, wherein the web material comprises one of a mastic, a polyethylene, a polyester, and a metal foil, and wherein the primary web material comprises one of a mastic, a polyethylene, a polyester, and a metal foil.

62. (New) The method of claim 41, wherein the rotary die and the anvil roller are mounted on a lifting mechanism, wherein a second rotary die and a second anvil roller are mounted on a second lifting mechanism in a raised position, and wherein the method further comprises the steps of:

(e) lifting the rotary die and the anvil roller out of service;

(f) lowering the second rotary die and the second anvil roller;

(g) feeding additional web material between the second rotary die and the second anvil roller, wherein the second rotary die and the second anvil roller are rotating in opposite directions;

(h) cutting the additional web material with the second rotary die and the second anvil roller into additional web product and additional web flash;

(i) conveying the additional web product away from the second rotary die and the second anvil roller; and

(j) removing the additional web flash for recycling.

63. (New) The method of claim 51, wherein the rotary die, the anvil roller, and the second anvil roller are mounted as a first assembly on a lifting mechanism, wherein a second assembly including a second rotary die, a third anvil roller, and a fourth anvil roller is mounted on a second lifting mechanism in a raised position, and wherein the method further comprises the steps of:

(l) lifting the first assembly out of service;

(m) lowering the second assembly; and

(n) repeating steps (a) through (k) using the second assembly.

64. (New) A method for laminating a primary web material and a secondary web material comprising the steps of:

(a) feeding the secondary web material between a rotary die and a first anvil roller, wherein the rotary die and the first anvil roller are rotating in opposite directions;

(b) cutting the secondary web material with the rotary die into a secondary web product and a secondary web flash;

(c) removing the secondary web flash for recycling;

(d) adhering the secondary web product to the rotary die;

(e) rotating the secondary web product around the rotary die to the bottom of the rotary die;

(f) feeding the primary web material between the rotary die and a second anvil roller, wherein the rotary die and the second anvil roller are rotating in opposite directions;

(g) joining the secondary web product and the primary web material at a location between the rotary die and the second anvil roller;

(h) cutting the primary web material with the rotary die into a primary web product and a primary web flash, wherein the primary web product is equal in size and shape to the secondary web product and is attached to the secondary web product to form a final product;

(i) conveying the final product away from the rotary die and the second anvil roller; and

(j) removing the primary web flash for recycling.

65. (New) The method of claim 64, wherein the step of feeding the primary web material comprises conveying the primary web material on a vacuum belt.

66. (New) The method of claim 64, wherein the step of conveying the final product away comprises conveying the final product away on a vacuum belt.

67. (New) The method of claim 64, wherein the step of removing the secondary web flash comprises conveying the secondary web flash on a belt.

68. (New) The method of claim 64, wherein the step of removing the secondary web flash comprises vacuuming the secondary web flash off of the first anvil roller.

69. (New) The method of claim 64, wherein the step of removing the primary web flash comprises conveying the primary web flash on a belt.

70. (New) The method of claim 64, wherein the step of removing the secondary web flash further comprises applying lubricant to the rotary die to ease removal of the secondary web flash from the rotary die.

71. (New) The method of claim 64, wherein the step of removing the primary web flash further comprises applying lubricant to the rotary die to ease removal of the primary web flash from the rotary die.

72. (New) The method of claim 64, wherein the step of adhering the secondary web product to the rotary die comprises applying a vacuum through the rotary die.

73. (New) The method of claim 64, wherein the step of adhering the web product to the rotary die comprises applying temporary adhesive to the rotary die.

74. (New) The method of claim 64, wherein the step of cutting the primary web material further comprises pressing the secondary web product onto the primary web product using foam of the rotary die.

75. (New) The method of claim 64, wherein the rotary die, the first anvil roller, and the second anvil roller are mounted as a first assembly on a lifting mechanism, wherein a second assembly including a second rotary die, a third anvil roller, and a fourth anvil roller is mounted on a second lifting mechanism in a raised position, and wherein the method further comprises the steps of:

(k) lifting the first assembly out of service;

(l) lowering the second assembly; and

(m) repeating steps (a) through (j) using the second assembly.

76. (New) The method of claim 64, wherein the primary web material comprises at least one member selected from the group consisting of a mastic, a polyethylene, a polyester, and a metal foil, and wherein the secondary web material comprises at least one member selected from the group consisting of a mastic, a polyethylene, a polyester, and a metal foil.

77. (New) A method for changing a shaping or lamination process comprising:

(a) arranging a plurality of die and anvil roller assemblies in succession along a production line;

(b) mounting the plurality of die and anvil roller assemblies on a plurality of lifting mechanisms;

(c) engaging a first portion of the plurality of die and anvil roller assemblies in production;

(d) lifting a second portion of the plurality of die and anvil roller assemblies out of service; and

(e) simultaneously raising the first portion of the plurality of die and anvil roller assemblies and lowering the second portion of the plurality of die and anvil roller assemblies.

78. The method of claim 41, wherein the web product comprises a mastic and a film.

79. The method of claim 78, wherein the film comprises polyester.

80. The method of claim 79, wherein the web product comprises an automotive sealant.

REMARKS

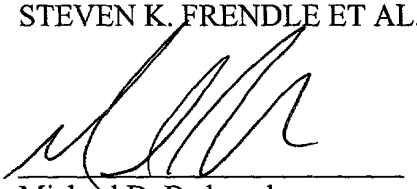
The foregoing amendment is being made to pursue non-elected claims that were restricted in the parent application. Accordingly, Applicants have canceled claims 1-40 and added new claims 41-80. Therefore, claims 41-80 are currently pending.

In addition, this amendment, in conjunction with the concurrently filed Request for Approval of Drawing Changes, corrects informalities related to Figure 5. Specifically, Applicant has re-labeled Figure 5 as Figure 5a and Figure 5b, and has amended the specification accordingly.

No new matter has been added. A favorable action on the merits of the pending claims is respectfully requested.

Respectfully submitted,

STEVEN K. FRENDLE ET AL.

By: 

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Date: **June 6, 2001**

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

Paragraph beginning on page 1, line 3:

The present application is a divisional application of the nonprovisional patent application serial number 09/300,387 filed April 27, 1999, entitled "Method and Apparatus for Die Cutting and Making Laminate Articles," which claimed [The present application claims] priority from the filing date of the provisional patent application serial number 60/083,290 filed April 28, 1998, entitled "Method and Apparatus for Die Cutting and Making Laminate Articles."

Paragraph beginning on page 7, line 10:

[Figure 5 is] Figures 5a and 5b are [an] enlarged front [view] views of the anvils and rotary die of the sections illustrated in Figures 3 and 4.

Paragraph beginning on page 7, line 12:

Figure 6 is an exploded view of the rotary die illustrated in [Figure 5] Figures 5a and 5b.

Paragraph beginning on page 13, line 8:

The compressive force or downward pressure to the rotary die 301 may be applied to the bearer surfaces 506 or journals 507 of rotary die 301, as shown in [Figure 5] Figures 5a and 5b. The bearer surfaces 506 of the rotary die are located at both ends of the cylindrical die and extend radially outward beyond the cutting surface of the die. The journals 507 are located on the outside of the apparatus, on both sides, where the axle of the rotary die exits the casing of the apparatus. In the preferred embodiment of the present invention, as shown in [Figure 5] Figures

5a and 5b, the downward pressure is applied to the bearer surfaces 506 to prevent the rotary die 301 from lifting up off of the primary web material 302 as the primary web material 302 is being cut or laminated.

Paragraph beginning on page 16, line 8:

For both the shaping and lamination configurations, in the preferred embodiment of the present invention, the rotary die and anvil roller are configured to provide specific cuts or shaping. As illustrated in [Figure 5] Figures 5a and 5b, a stepped anvil roller 502 can be stepped down so as to touch the blades of rotary die 501 and cut through the primary or secondary web material to produce what is known as a through-cut. Alternatively, regular anvil roller 503 is offset from the cutting surface of the rotary die 501, thereby only cutting a portion of the material it contacts to produce what is known as a kiss-cut. Manufacturing processes use the kiss-cut to cut only a portion of a multi-layered material, *e.g.,* cutting a primary web material but leaving an attached liner intact.

Figure 5

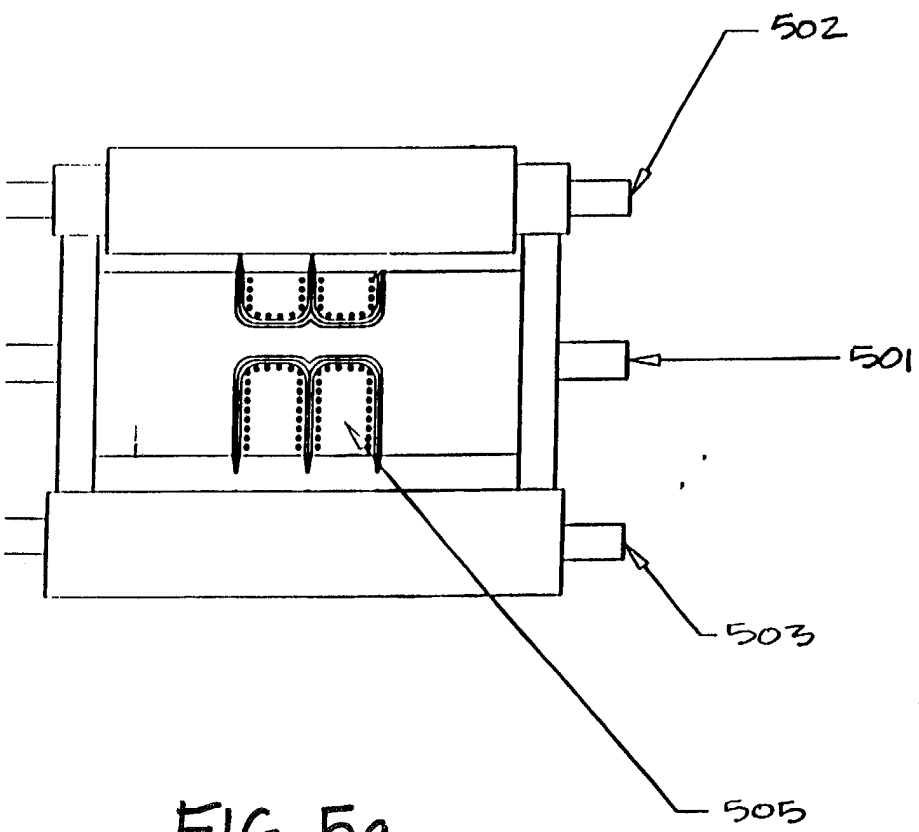

FIG. 5a

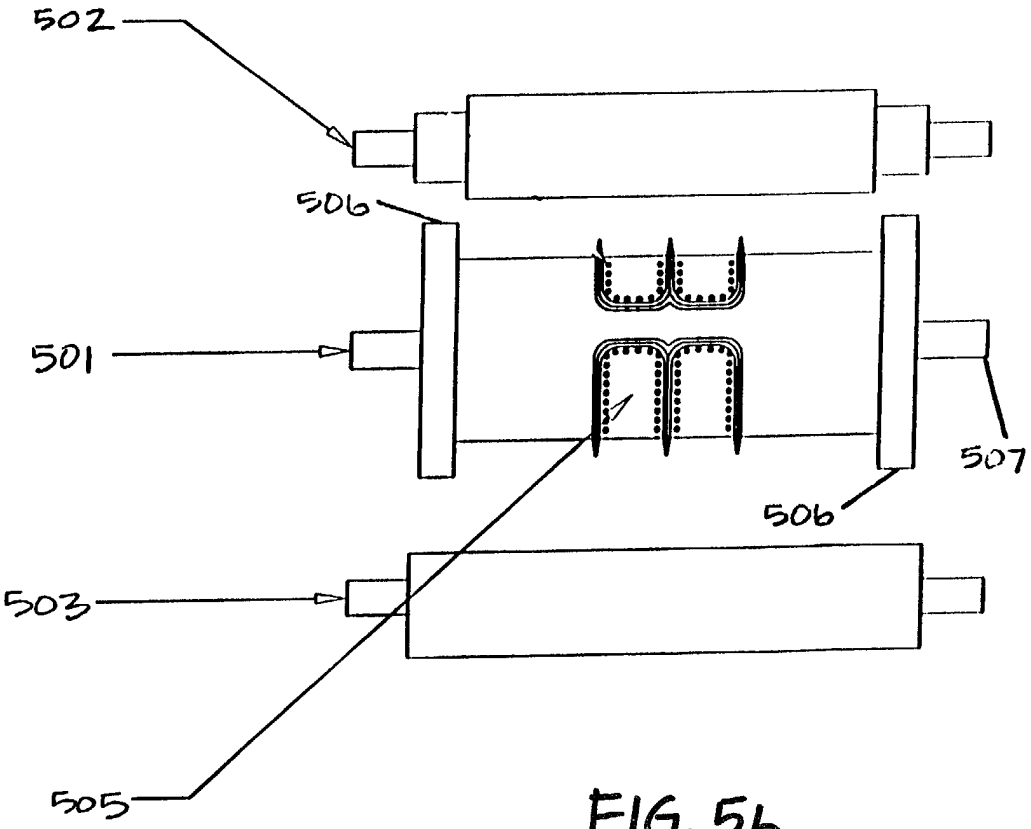

FIG. 5b